

**UNIVERSITY COLLEGE LONDON**

*University of London*

**EXAMINATION FOR INTERNAL STUDENTS**

*For The Following Qualification:-*

*B.Sc.*

**Health Sciences HSC25: Basis of Medicine (1)**

**COURSE CODE : HESC0025**

**UNIT VALUE : 1.00**

**DATE : 23-MAY-03**

**TIME : 10.00**

**TIME ALLOWED : 3 Hours**

**NOTES TO CANDIDATES**

- MARKS ALLOCATED TO **SECTION A** WILL BE 150/300
- MARKS ALLOCATED TO **SECTION B** WILL BE 150/300

**SECTION A**

Write short notes on **SIX** of the following topics:

(Spend about 15 minutes on each answer).

1. Methods used to diagnose viral infection.
2. Control of microbiological infection in out patient clinics.
3. Ways in which pathogens escape immunity.
4. Chemical mediators involved in acute inflammation.
5. Causes of a low platelet count.
6. Deficiency anaemias.
7. Epidemiological methods of assessing the effects of treatment.
8. The value of migrant studies in epidemiology.
9. What is a demyelinating disease? Choose an example and discuss the pathology of the condition.
10. Swelling of the legs during pregnancy.
11. Factors which influence wound healing.
12. Classification of burns.
13. Differential diagnosis of septic arthritis and gout.
14. Features of ankylosing spondylitis.
15. Draw a flow chart depicting the pathogenesis of cancer.

**TURN OVER**

## Health Sciences HSC25: Basis of Medicine (I)

### SECTION B

Answer **THREE** of the following seven questions.

(Spend about 30 minutes on each answer).

1. A 2 year old child is admitted to hospital with a high fever and severe pain in his left leg. The diagnosis of acute osteomyelitis is suggested.
  - a. Briefly outline the features of the inflammatory process as seen in this patient.
  - b. How do phagocytic cells deal with bacteria in an inflammatory site?
  - c. What are the features that would imply that the inflammation has become chronic?
  
2. A 25 year old man arrives at the Accident and Emergency Department with a high fever. Chest x ray shows pneumonia, possibly due to an "opportunistic infection". While you are taking blood samples from him inadvertently you stick the needle into your finger.
  - a. What are the risks that you need to consider?
  - b. What action should be taken immediately?
  - c. What is meant by the term "opportunistic infection"? What patients are at risk for this?
  
3. A 54 year old woman attends the clinic with ulcers on her feet. She reports that they have been numb for five years. On examination they are cold and pale. She has no other complaints, but comments that she has had a chronic medical condition for the past 20 years.
  - a. What other questions would you like to ask her?
  - b. What physical examination would you perform?
  - c. What conditions might cause her peripheral neuropathy?
  
4. A 65 year old man presents with pain in his left leg following exercise, and is found to have absent peripheral pulses in his left foot. Angiography shows "severe atheroma in his left common iliac artery".
  - a. Outline the pathological sequence of events which lead to the formation of "atheroma".
  - b. What are the risk factors which pre-dispose to this condition?
  - c. What are the possible complications of atheroma at this site?
  
5. A 65 year old woman complains of increasing discomfort and pain in her right hip.
  - a. What are the clinical and pathological features that would support a diagnosis of osteoarthritis?
  - b. What are the important features that distinguish this condition from rheumatoid arthritis?
  - c. Is this patient at risk for osteoporosis? How would you investigate for this?

**CONTINUE**

## Health Sciences HSC25: Basis of Medicine (I)

6. A 65 year old woman presents with an ulcer on her left foot. She gives a history of weight gain, severe thirst, and of passing increased amounts of urine over the past six months.
  - a. What is your provisional diagnosis that would lead to these symptoms? How would you confirm the diagnosis?
  - b. Why should this diagnosis be associated with a foot ulcer?
  - c. What are the other potential complications of her condition?
  
7. A 70 year old man complains of pain in his back and is found to have many round lytic (radiolucent) lesions in his vertebrae.
  - a. What are the kinds of tumours that would you suspect in this patient?
  - b. What are the different ways in which tumours spread?
  - c. What laboratory (e.g. biochemical, haematological, histopathological, immunological) investigations would be helpful in the management of this patient?

**END OF PAPER**